# PROGRAM ANNOUNCEMENT TO DOE NATIONAL LABORATORIES FOR SUBMISSION OF APPLICATIONS FOR RESEARCH AND DEVELOPMENT PROJECTS



# Laboratory Call for Research, Development and Analysis of Geothermal Technologies

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**Geothermal Technologies Program** 

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### **SECTION 1 – GENERAL INFORMATION**

# I. SUMMARY

Note: This Program Announcement ("announcement" or "Lab Call") includes two phases -- a preliminary application phase and a final application phase. Only those applicants who submit to the preliminary application phase and are selected to continue are eligible to submit final applications under this announcement.

The Geothermal Technologies Program (GTP) will facilitate research, development, and demonstration to establish Enhanced Geothermal Systems (EGS) as a major contributor for electricity generation.

GTP's key contribution to Department of Energy (DOE) Strategic Theme 1, Goal 1.1 (Energy Diversity) is to increase national energy options, reduce vulnerability to disruptions and increase flexibility of the market to meet U.S. needs. One way to accomplish this is to extract heat from hot, underground rock, an indigenous resource, and convert the heat to electricity. Enhanced Geothermal Systems are engineered reservoirs created to produce energy from geothermal resources deficient in water and/or permeability. DOE is seeking advanced technology to address key aspects of site selection and characterization, reservoir creation and validation, reservoir sustainability, and plant operation and management. The ultimate goal is to make large amounts of the earth's heat available for productive use at economic costs.

In fiscal year 2008 (FY08), DOE released a Funding Opportunity Announcement (FOA) for research, development and field demonstration of EGS next-generation technologies. Subject to annual appropriations and successful completion of stage-gate reviews, DOE will provide up to \$43.1 million over four years to 21 awardees selected as a result of this FOA. With cost-share by the recipients, the public-private investments will be up to \$78 million. In FY09, DOE intends to issue two additional FOAs to continue its partnership with the geothermal community for research, development, and field demonstration of EGS technologies. This EGS Lab Call is intended to supplement these efforts.

# A. Eligible Applicants

The applicant must be a DOE National Laboratory as defined by Section 2 of the Energy Policy Act of 2005. National Laboratories (Labs) include: Ames Laboratory; Argonne National Laboratory; Brookhaven National Laboratory; Fermi National Accelerator Laboratory; Idaho National Laboratory; Lawrence Berkeley National Laboratory; Lawrence Livermore National Laboratory; Los Alamos National Laboratory; National Energy Technology Laboratory; National Renewable Energy Laboratory; Oak Ridge National Laboratory; Pacific Northwest National Laboratory; Princeton Plasma Physics Laboratory; Sandia National Laboratory; Savannah River National Laboratory; Stanford Linear Accelerator Center; and Thomas Jefferson National Accelerator Facility.

DOE encourages collaborative projects that leverage capabilities among DOE National Laboratories. For such projects, a specific laboratory must be designated as the lead applicant, and only one application should be submitted for the entire project.

Entities other than DOE National Labs are not eligible to apply as primary applicants or as subcontractors under this announcement.

# **B.** Applications

Preliminary and Final Applications are to be prepared for the complete project period (three years). See Part III of this Program Announcement below for application preparation instructions, and Part IV for Evaluation Criteria and procedures. Part V identifies additional general requirements that are also applicable.

# C. Application Submittal Address

Preliminary and Final Applications must be submitted to the following email address: GeothermalLabCall09@go.doe.gov.

ONLY APPLICATIONS SUBMITTED THROUGH THIS EMAIL ADDRESS WILL BE CONSIDERED FOR AWARD. APPLICATIONS WILL NOT BE ACCEPTED THROUGH THE IIPS OR GRANTS.GOV WEBSITES.

Applications submitted through this email address constitute submission of electronically signed applications. The name of the authorized organizational representative (i.e., the administrative official, who, on behalf of the proposing organization, is authorized to make certifications and assurances or to commit the applicant to the conduct of a project) must be typed in the signature block on the form to be accepted as an electronic signature.

Amendments to this announcement will be posted on the DOE Industry Interactive Procurement System (IIPS).

# D. Application Due Dates and Times

Preliminary applications must be received by **January 14, 2009**, no later than **11:59 PM Eastern Time**. You are encouraged to transmit your application well before the deadline. Successful preliminary applications will receive invitations to submit a final application. Notification letters will be sent to all applicants by January 26, 2009.

Final applications must be received by **February 18, 2009**, no later than **11:59 PM Eastern Time**. Only applicants who were selected in the preliminary application phase are eligible to submit final applications. You are encouraged to transmit your application well before the deadline.

APPLICATIONS, INCLUDING ALL APPLICATION FILES, RECEIVED AFTER THE DEADLINE, AS DEMONSTRATED BY THE EMAIL DATE/TIME STAMP, WILL NOT BE REVIEWED OR CONSIDERED FOR AWARD.

# E. For Further Information or Questions and Answers Contact

Questions regarding the content of the announcement must be submitted to the following email address: GeothermalLabCall09@go.doe.gov. DOE will respond to a question within approximately two business days.

### II. PROGRAM ANNOUNCEMENT INFORMATION

### A. Introduction

The mission of the Geothermal Technologies Program is to facilitate research and development on EGS to advance the technology as an economically competitive contributor to the U.S. energy supply.

GTP's key contribution to DOE Strategic Theme 1, Goal 1.1 (Energy Diversity) is to increase national energy options and reduce dependence on oil, thereby reducing vulnerability to disruptions and increasing the flexibility of the market to meet U.S. needs. One way to accomplish this is to extract heat from hot, underground rock, an indigenous resource, and convert the heat to electricity. Enhanced Geothermal Systems are engineered reservoirs created to produce energy from geothermal resources deficient in water and/or permeability. DOE is seeking advanced technology to address key aspects of site selection and characterization, reservoir creation and validation, reservoir sustainability, and plant operation and management. The ultimate goal is to make large amounts of the earth's heat available for productive use at economic costs.

# B. Scope

GTP is seeking to develop new and innovative technologies to advance the utilization of geothermal energy. DOE National Laboratories are encouraged to propose innovative ideas related to one or more of the following research topic areas:

- Air Cooling To develop a lab-based analysis of hybrid-water/air systems, examine the
  interaction of turbine design and cooling needs to optimize/minimize performance/costs, and
  examine the output variability of air cooling systems to identify areas of opportunity to
  improve performance;
- Drilling Systems To reduce the cost, while maintaining or increasing the rate of
  penetration and performance of drilling systems for use in hard rock in high temperature and
  pressure zones and deep wells;
- **High Temperature Downhole Tools** To develop tools capable of tolerating the extreme environment of supercritical reservoirs (374 °C and 22 MPa for pure water). These instruments may include: temperature and pressure sensors, flow meters, fluid samplers, inclination and direction sensors, acoustic instruments (high and low frequency), resistivity probes, natural gamma ray detectors, epithermal neutron scattering gauges, rock density gauges (gamma and sonic), casing monitoring devices (e.g. cement bond logs and casing collar locators), fluid conductivity, pH indicators and well dimension probes (caliper).
- High-Temperature-High-Volume Lifting To define the well fluids lifting requirements
  criteria required by the industry for the foreseeable future; review alternative lifting systems
  and their potential for development to meet industry requirements; and research, design,
  develop, test and demonstrate a well fluid lifting system which will provide lifting of well fluid
  to meet the foreseeable pressure, temperature and longevity needs of the EGS industry for
  the coming ten years.
- High-Pressure-High-Volume Pumping To define the pressure, flow rate and temperature requirements criteria for both stimulating and circulating fluids required by the industry for the foreseeable future; review alternative available and conceived surface pumping systems and their potential for development to meet industry requirements; and research, design, develop, test and demonstrate a pumping system for stimulating and for circulation to meet the foreseeable pressure, temperature and longevity needs of the EGS industry for the coming ten years.

- Integrated Chemical, Thermal, Mechanical and Hydrological Modeling To design a modeling tool that integrates thermal, mechanical, hydrological and chemical modeling;
- **Image Fluid Flow** To accurately image fluid in created and/or pre-existing fractures so as to map flow through the reservoir;
- Induced Seismicity To identify causal mechanisms of induced seismicity and develop new and improved methods to use microearthquakes (MEQ) to image the physical properties of the reservoir and model the relationship between MEQ and injection and production;
- Remote Sensing Technologies To improve and advance remote sensing technologies or combinations of technologies that can identify/site potential hydrothermal resources without prior surface expression<sup>1</sup>, and enhance the effectiveness of predictive models for drilling and site placement of new power plants;
- **Smart Tracers** To develop reservoir tracers to record physical conditions in the reservoir using nano-electronics technology for injection into geothermal reservoir and recovery at production wells;
- **Stimulation Prediction Models** To develop and validate models to predict a reservoir's response to stimulation;
- Supercritical Carbon Dioxide/Reservoir Rock Chemical Interactions To develop a
  chemical model or modify an existing chemical model capable of modeling the chemical
  interactions between supercritical carbon dioxide and EGS reservoir rocks of various
  compositions in aqueous and non-aqueous environments;
- Systems Engineering/Analysis To develop/adapt lifecycle analytical models that address baseline systems cost; installed capital cost for different penetration levels; characterize and evaluate the impacts of specific technology improvements; and forecast potential employments for EGS, conventional hydrothermal, low temperature geothermal, coproduced fluids, ground source heating and cooling, and direct use;
- **Temporary Sealing of Fractures** To develop techniques to temporarily limit the inflow of formation fluids into the wellbore during drilling for better control of the drilling process;
- Tracers and Tracer Interpretation To adapt or develop reservoir tracers and/or tracer
  interpretation techniques that provide information beyond well-to-well connectivity such as
  fracture surface area or fracture spacing;
- Zonal Isolation To isolate wellbore zones in high pressure and temperature environments in open (uncased) and cased holes using packers, expandable tubulars or other methods capable of providing zonal isolation; and
- Working Fluids for Binary Power Plants To identify non-azeotropic mixtures of working
  fluids for improved utilization of available energy in subcritical cycles; to characterize the
  composition and thermophysical and transport properties of those mixtures; to identify
  working fluids for supercritical cycles and trilateral cycles; and characterize the composition,

<sup>1</sup> In September 2008, USGS released study results estimating a mean value of undiscovered hydrothermal resources in excess of 33,000MWe. See http://pubs.usgs.gov/fs/2008/3082/pdf/fs2008-3082.pdf

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thermophysical, and transport properties of those working fluids.

# C. Budget

Approximately \$20,000,000 is expected to be available for new awards under this announcement over the next three-year period subject to Congressional appropriations. Another Lab Call may be announced in mid-2009 for new awards for a four to five-year funding period.

# D. Anticipated Award Size

DOE expects to fund each award at \$300,000 to \$650,000 per year over three years. The awards will be incrementally funded depending on the funds available, number of awards, technical merit review, and program policy review.

### **III. APPLICATION PREPARATION INSTRUCTIONS**

<u>NOTE:</u> DOE National Laboratories are to submit only one application per topic and a maximum of four applications per National Laboratory. Involvement in any proposed project as either a prime applicant OR subcontractor to another National Laboratory counts towards the four application limit for each DOE National Laboratory.

# A. Preliminary Applications

The preliminary application narrative must address the research concept. It is requested that the applicant submit a two-page document. The first page is a cover page and shall consist of the name of the organization, the announcement number, the project title, research topic area, and both the technical and business points of contact with names, titles, addresses, telephone and email addresses. The second page must contain a summary of the proposed activity, the goals and the objectives of the project, the degree of innovation of the project, and a brief justification of the industry need for the proposed project.

The preliminary application must be no more than two pages as described above. It should be single spaced, with 1 inch margins (top, bottom, left, right), with font no smaller than 11 point and when printed will fit on size 8 ½" x 11" paper. Save and submit this information in a file named "PreApp\_[insert Lab Name]\_[insert Topic Area]."

# B. Final Applications (By Invitation Only)

Applicants submitting a final application must complete the mandatory forms (Field Work Proposal, Project Narrative, and Authorization for DOE National Labs) in accordance with the instructions on the forms and the additional instructions below.

# 1. Field Work Proposal File

Applicants must complete a DOE Field Work Proposal in accordance with the requirements in DOE Order 412.1 Work Authorization System. This order and the DOE Field Work Proposal form are available at

http://management.energy.gov/business doe/business forms.htm. Save this form in a file named "FWP." (This document does not count towards the five page limit on the Project Narrative file.)

# 2. Project Narrative File

The Project Narrative should provide a clear description of the work to be undertaken and how you plan to accomplish it. It should address each of the merit review criteria and subcriteria listed in Part IV.A.3. Provide sufficient information so that the reviewers will be able to evaluate the application in accordance with these merit review criteria. Do not include any Internet addresses (URLs) that provide information necessary to review the application. See <a href="Part III.C">Part III.C</a> for instructions on how to mark proprietary information in the application.

The Project Narrative file must be formatted to separately address each of the sections listed below. Each section must not exceed the specified page limitation when printed using standard 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right). The font must not be smaller than 11 point.

The Project Narrative must not exceed five pages (excluding cover page), as prescribed below. If you wish to include graphics and visual material, including charts, graphs, maps, photographs, and other pictorial presentations, this information must be included in the Narrative document and will be counted in the page limitation for this section. Any pages that exceed the specified maximum number of pages for any item will be removed and will not be considered during the evaluation. Evaluators will review only the number of pages specified.

The Narrative should consist of the following sections, with page limits where indicated:

# a) Cover Page (one-page limit)

The Project Narrative cover page should indicate the name of the organization, the announcement number, the project title, research topic area, and both the technical and business points of contact for the applicant, denoting the names, titles, addresses, telephone, and email addresses. The cover page should also identify the name and type of organization for all other DOE Lab participants, along with names, titles, addresses, telephone, and email addresses of participant contacts.

# b) Technical Proposal (five-page limit)

The Technical Proposal portion of the Project Narrative should be structured in accordance with the following sections (the structure, order of contents, etc. within a section are at the discretion of the applicant). If you wish to include graphics and visual material, including charts, graphs, maps, photographs, and other pictorial presentations, this information must be included in the Technical Proposal section and will be counted in the page limitation for this section. Lists of references for the document will not count against the page limit.

# Section I: Technical Concept

- Describe the objectives of the proposed technical concept, the specific technical challenges being addressed, and the overall relevance and applicability of the concept and approach to the specific objectives of the DOE GTP.
- Address the feasibility of the concept, including a qualitative discussion of prior or ongoing proof-of-concept work, if applicable.
- Describe the innovation of the proposed technology or methodology compared to

- previous and ongoing work by the applicant and/or others and provide a justification for how the proposed project addresses industry needs (via industry/academia) collaboration.
- Address and quantify the degree to which the project will advance EGS technologies to address key aspects of site selection and characterization, reservoir creation and validation, reservoir sustainability, and plant operation and management.

### Section II: Work Plan

- Describe the proposed technical approach and discuss the likelihood of success.
- Include a Gantt chart/schedule that has milestones and interrelated tasks identified that link directly to the successful accomplishment of the project objectives.
- Apply Stage-Gate methodology and include identification of, and criteria for, go/no-go decisions, and identify of success/failure metrics to enable effective project management.
- Describe the budget and work distribution among the team members to accomplish the stated objectives.

### Section III: Qualifications and Resources

- Describe the current organization experience in similar projects which lead to successful technology development.
- Discuss facilities (quality, availability and appropriateness) and equipment to accommodate the proposed project.
- Discuss experience and availability of key personnel to complete the proposed project.

Save all the Project Narrative information in a single file named "Project Narrative."

# 3. Authorization for DOE National Labs

The cognizant Contracting Officer must authorize in writing the use of a DOE National Laboratory contractor on the proposed project and this authorization must be submitted with the final application. The following language is acceptable for this authorization.

"Authorization is granted for the \_\_\_\_\_ Laboratory to participate in the proposed project. The work proposed for the laboratory is consistent with or complementary to the missions of the laboratory and will not adversely impact execution of the DOE assigned programs at the laboratory."

Save the authorization in a file named "Authorization Statement."

# 4. Summary of Application Documents

- Field Work Proposal File
- Project Narrative File

Authorization for DOE National Labs

# C. Proprietary Application Information

It should be noted that proposal information and data submitted directly from a National Laboratory cannot be considered proprietary; although, information and data submitted by a non-laboratory third party partner(s) may be considered proprietary.

Applications submitted in response to this announcement may contain trade secrets and/or privileged or confidential commercial or financial information which the applicant and/or industrial partners do not want to be used or disclosed for any purpose other than evaluation of the application. The use and disclosure of such data may be restricted, provided the applicant marks the cover sheet of the application with the following legend, specifying the pages of the application which are to be restricted in accordance with the conditions of the legend:

"The data contained in pages \_\_\_\_\_ of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein to the extent provided in the award. This restriction does not limit the Government's right to use or disclose data obtained without restriction from any source, including the applicant."

Further, to protect such data, each page containing such data shall be specifically identified and marked, including each line or paragraph containing the data to be protected with a legend similar to the following:

"Use or disclosure of the data set forth above is subject to the restriction on the cover page of this application."

It should be noted, however, that data bearing the aforementioned legend may be subject to release under the provisions of the Freedom of Information Act (FOIA), if DOE or a court determines that the material so marked is not actually proprietary and, thus, not exempt under the FOIA. The Government assumes no liability for disclosure or use of unmarked data and may use such data for any purpose.

Applicants are hereby notified that DOE intends to make all applications submitted available to non-Government personnel for the sole purpose of assisting DOE in its evaluation of the applications. These individuals will be required to protect the confidentiality of any specifically identified proprietary information obtained as a result of their participation in the evaluation.

### IV. EVALUATION AND SELECTION

# A. Criteria

# 1. Compliance Review for Preliminary and Final Applications

Prior to a comprehensive evaluation, a compliance review of the applications will be performed by DOE to determine the following: 1) Eligibility, and 2) Responsiveness to the objectives of the Lab Call. If an application fails to meet these requirements, it may be deemed non-responsive and eliminated from further review. For applicants who do not pass the compliance review, DOE will provide notice immediately upon completion of the

Weight: [40%]

Weight: [20%]

compliance review. This notice will consist of the findings of the preliminary review as determined by DOE.

# 2. Preliminary Review Criteria

The following evaluation criteria will be used in the evaluation of preliminary applications:

- Innovation: May refer to incremental, radical, and revolutionary changes in thinking, products, processes, or organizations. A distinction is typically made between *inventions*, ideas made manifest, and *innovations*, ideas applied successfully.
- EGS Advancement: How this project will advance beyond the current state-of-the-art or add to the geothermal knowledge base.

Following DOE review and comment, preliminary applications will be rated "Satisfactory" or "Unsatisfactory" based on the criteria listed above. A preliminary application determined to be "Unsatisfactory" will not invited to submit a final application.

### 3. Final Merit Review Criteria

# **EVALUATION CRITERIA FOR FINAL APPLICATIONS**

The following evaluation criteria will be used in the comprehensive evaluation of final applications. For each criterion, the weighting (out of a total of 100%) is indicated to show the relative importance.

# **Criterion 1: Innovation and Technical Objectives**

- Clarity and relevance of the project objectives.
- Novelty, innovation, uniqueness, and originality of the project objectives.
- Technical merit of the proposed research, development, or demonstration.
- Extent to which the proposed work will expand EGS knowledge.

# Criterion 2: Technical Approach and Project Management Plan Weight: [40%]

- Validity and completeness of the proposed technical approach and likelihood of success based on the current status of the proposed technology and the scientific merit of the proposed approach.
- Adequacy, reasonableness and soundness of the proposed Gantt chart/schedule with milestones and interrelated tasks identified that will lead to the successful accomplishment of the project objectives.
- Effective application of the Stage-Gate methodology and identification of critical metrics to enable effective project management.
- Adequacy, appropriateness, and reasonableness of the proposed work and budget distribution among the team members to accomplish the stated objectives.

# Criterion 3: Qualifications and Resources

- Evidence of current organization experience and success in similar projects which led to successful technology development.
- Adequacy (quality, availability and appropriateness) of existing facilities and equipment to the proposed project.
- Sufficiency of experience and availability of key personnel to complete the proposed

project.

### 4. Other Selection Factors

The Selection Official will consider the following program policy factors in the selection process:

- Technological diversity
- Extent to which labs are able to collaborate with other labs to leverage capabilities

The above factors will be independently considered by the Selection Official in determining the optimum mix of applications that will be selected for support. These policy factors will provide the Selection Official with the capability of developing, from the competitive Lab Call, a broad involvement of organizations and organizational ideas, which will both enhance the overall technology research effort and upgrade the program content to meet the goals of the DOE.

### B. Review And Selection Process

### 1. Merit Review

Final applications will be evaluated, scored, and ranked according to the Evaluation Criteria for Final Applications listed in Part IV. A. 3 above by a final Merit Review Committee. The final merit review committee will make recommendations to the Selection Official as to whether or not each final application is determined to have sufficient technical merit to be considered for funding based exclusively on the technical strengths and weaknesses of the application.

# 2. Non-governmental Reviewers

In conducting the merit review evaluation, the Government may seek the advice of qualified non-Federal personnel as reviewers. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The applicant, by submitting its application, consents to the use of non-Federal reviewers/administrators. Non-Federal reviewers must sign conflict of interest and non-disclosure agreements prior to reviewing an application. Non-Federal personnel conducting administrative activities must sign a non-disclosure agreement.

# 3. Selection

The Selection Official will consider the merit review recommendation, program policy factors, and the amount of funds available in making selection decisions.

# 4. Debriefing for Final Applications

After completing the comprehensive review of the final applications, DOE will notify applicants selected for award. This notice of selection is not an authorization to begin performance. Organizations whose applications have not been selected will be advised as promptly as possible. This notice will include the strengths and weaknesses as determined by the Merit Review Committee and will constitute the debriefing for the final application phase.

### 5. Discussions and Award

The Government may enter into discussions with a selected applicant for any reason deemed necessary, including but not limited to: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; and/or (3) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the Government will preclude award to the applicant.

# C. Anticipated Notice of Award

DOE anticipates notifying applicants selected to submit a final application by January 26, 2009 with a final application due date of February 18, 2009 and making funds available in April 2009.

# V. GENERAL CONDITIONS

### A. Partial Awards

DOE reserves the right to support or to not support all, or any part of, any application.

# **B.** Reporting

In addition to the technical and financial progress reports typically provided by National Laboratories to DOE, reporting requirements will include the following:

- Annual Spend Plan;
- Annual Operating Plans;
- Technical and Financial reports quarterly and annually;
- Raw data, geological models, and analysis and results;
- Draft presentation summarizing conclusions;
- Attendance and presentation of results at annual program reviews;
- Peer/Program Review Report;
- Peer reviewed technical paper for trade journal publications;
- Final Report; and
- Other reports as deemed necessary by HQ.

# C. Intellectual Property Developed Under This Program

Patent Rights in any inventions that are conceived or first actually reduced to practice under awards made from this announcement and any rights in technical data created under such awards, will be governed by the terms and conditions of the Management and Operating (M&O) Contract of the applicant or applicants receiving an award and also will be governed by any applicable class patent waivers executed for that M&O Contract.

### D. Notice of Potential Disclosure Under Freedom of Information Act

Applicants should be advised that identifying information regarding all applicants, including applicant names and/or points of contact, may be subject to public disclosure under the Freedom of Information Act, whether or not such applicants are selected for negotiation of award.

### APPENDIX A – PERSONALLY IDENTIFIABLE INFORMATION

In responding to this Announcement, Applicants must ensure that Protected Personally Identifiable Information (PII) is not included in the following documents: Project Abstract, Project Narrative, Biographical Sketches, Budget or Budget Justification. These documents will be used by the Merit Review Committee in the review process to evaluate each application. PII is defined by the Office of Management and Budget (OMB) and DOE as:

Any information about an individual maintained by an agency, including but not limited to, education, financial transactions, medical history, and criminal or employment history and information that can be used to distinguish or trace an individual's identity, such as their name, social security number, date and place of birth, mother's maiden name, biometric records, etc., including any other personal information that is linked or linkable to an individual.

This definition of PII can be further defined as: (1) Public PII and (2) Protected PII.

- 1. **Public PII:** PII found in public sources such as telephone books, public websites, business cards, university listing, etc. Public PII includes first and last name, address, work telephone number, email address, home telephone number, and general education credentials.
- 2. **Protected PII:** PII that requires enhanced protection. This information includes data that if compromised could cause harm to an individual such as identity theft.

Listed below are examples of Public PII that Applicants may include in the files listed above to be evaluated by the Merit Review Committee:

- Phone numbers (work, home, cell)
- Street addresses (work and personal)
- Email addresses (work and personal)
- Digital pictures
- Birthday cards
- Birthday emails
- Medical information pertaining to work status (i.e. individual A is out sick today)
- Medical information included in a health or safety report
- Employment information that is not PII even when associated with a name
- Resumes, unless they include a Social Security Number
- Present and past position titles and occupational series
- Present and past grades
- Present and past annual salary rates (including performance awards or bonuses, incentive awards, merit pay amount, Meritorious or Distinguished Executive Ranks, and allowances and differentials)
- Present and past duty stations and organization of assignment (includes room and phone numbers, organization designations, work email address, or other identifying information regarding buildings, room numbers, or places of employment)
- Position descriptions, identification of job elements, and those performance standards (but not actual performance appraisals) that do not interfere with law enforcement programs or severely inhibit agency effectiveness
- Security clearances held
- Written biographies (e.g. to be used in a program describing a speaker)
- Academic credentials
- Schools attended

- Major or area of study
- Personal information stored by individuals about themselves on their assigned workstation or laptop unless it contains a Social Security Number

Listed below are examples of Protected PII that Applicants must not include in the files listed above to be evaluated by the Merit Review Committee.

- Social Security Numbers in any form
- Place of Birth associated with an individual
- Date of Birth associated with an individual
- Mother's maiden name associated with an individual
- Biometric record associated with an individual
- Fingerprint
- Iris scan
- DNA
- Medical history information associated with an individual
- Medical conditions, including history of disease
- Metric information, e.g. weight, height, blood pressure
- Criminal history associated with an individual
- Employment history and other employment information associated with an individual
- Ratings
- Disciplinary actions
- Performance elements and standards (or work expectations) that reveal an individual's performance appraisal
- Financial information associated with an individual
- Credit card numbers
- Bank account numbers
- Security clearance history or related information (not including actual clearances held)